Arizona State Retirement System Board



U.S. Equity Large Cap Asset Class

Gary R. Dokes, Chief Investment Officer Dan Kapanak, Manager of Investment Strategies Terry A. Dennison, Mercer Investment Consulting

Presentation Topics

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 - Mandates Overview
 - Quantitative:
 - Risk/Return Bubble Charts
 - Performance Analysis (Returns Based)
 - Alpha
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 - Performance Analysis (Returns Based)
 - Alpha
 - Information Ratio
 - Peer Review
 - Positions (Holdings Based)
 - Style Analysis
 - Economic Sectors

ASRS U.S. Equity Large Cap Asset Class (Aggregate)

ASRS U.S. Equity Large Cap Asset Class March 31, 2008

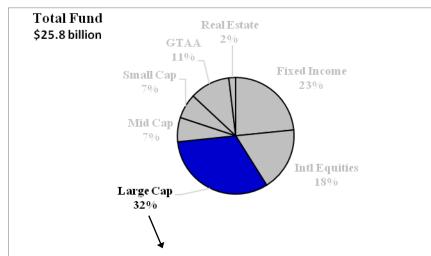
- Market Value: \$8.3b
- Passive Percent: 69%*
 - Target 65% 10%
- Active Style Composition:

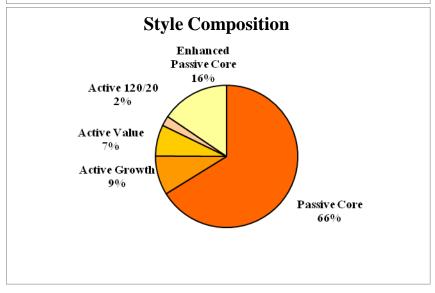
Growth: 49%

– Value: 39%

- 120/20: 12%

- Portfolios:
 - 3 Passive
 - 3 Active:
 - Quantitative: 3
- Average Fee: 7 bps





ASRS U.S. Equity Large Cap Managers Mandates Overview March 31, 2008

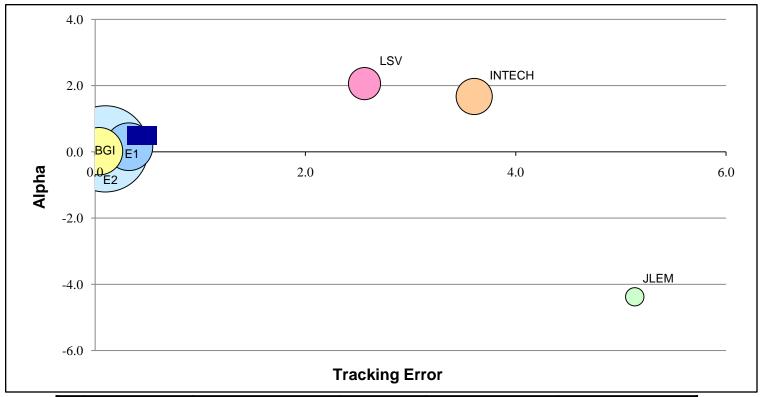
Manager	Style	Benchmark	Inception	Expected Alpha (bp)	Portfolio Assets (\$mil)	Strategy Assets (\$mil)
Active						
INTECH	Growth	S&P 500 Growth	12/31/02	350	\$738	\$27,085
LSV	Value	S&P 500 Value	12/31/02	200	\$588	\$23,900
Jacobs Levy	120/20	S&P 500	10/31/06	300	\$188	\$188*
Passive						
ASRS E1	Core	S&P 500	9/30/95	25	\$1,285	N/A
ASRS E2	Core	S&P 500	3/31/97	5	\$4,216	N/A
BGI	Core	S&P 500	7/31/89	0	\$1,267	\$167,264

^{*} Jacobs Levy manages \$5.2 billion in Long/Short Strategies

Risk/Return Bubble Chart

ASRS U.S. Equity Large Cap Asset Class

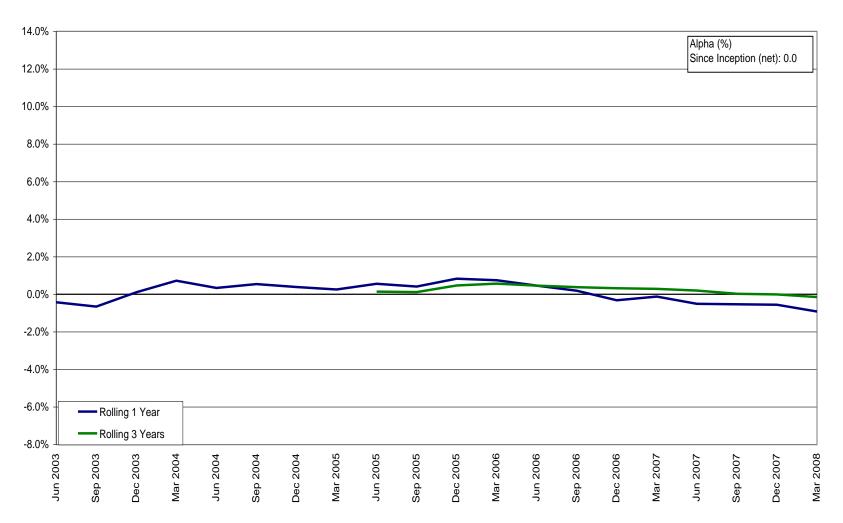
5 Year Period Ending March 31, 2008*



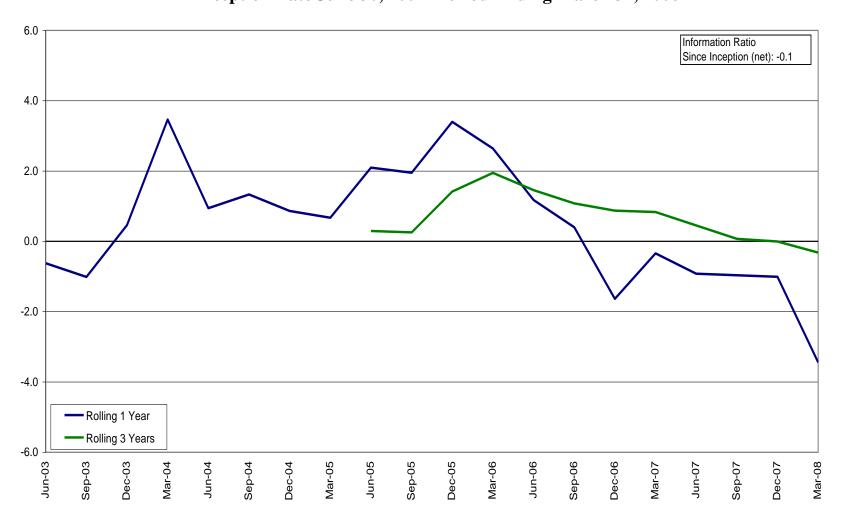
Manager	Portfolio Size	Alpha	Tracking Error	Information Ratio
INTECH	\$737.5	1.7	3.6	0.5
LSV	\$587.9	2.1	2.6	0.8
Jacobs Levy*	\$188.4	-4.3	5.7	-0.8
E1	\$1,285.5	0.2	0.3	0.5
E2	\$4,215.8	0.1	0.1	0.9
BGI	\$1,267.2	0.0	0.0	0.5
Asset Class	\$8,282.3	0.2	0.4	0.4

^{*} Jacobs Levy calculations include only 5 quarterly data points as the inception date was 10/31/06

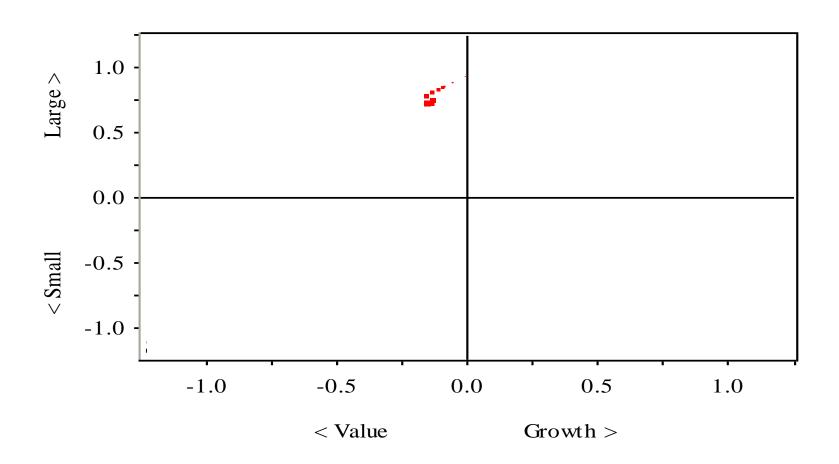
Alpha
ASRS U.S. Equity Large Cap Asset Class
Inception Date June 30, 2002 - Period Ending March 31, 2008



Information Ratio ASRS U.S. Equity Large Cap Asset Class Inception Date June 30, 2002- Period Ending March 31, 2008

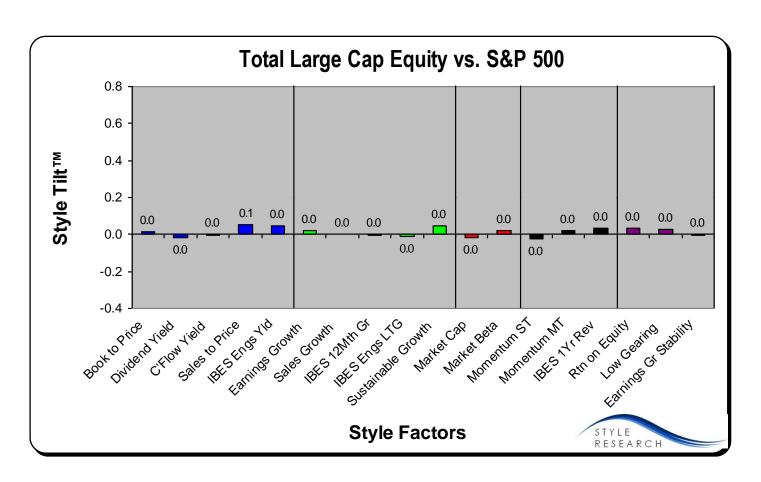


Positions: Style Analysis
ASRS U.S. Large Cap Equity Asset Class
Inception Date June 30, 2002 - March 31, 2008

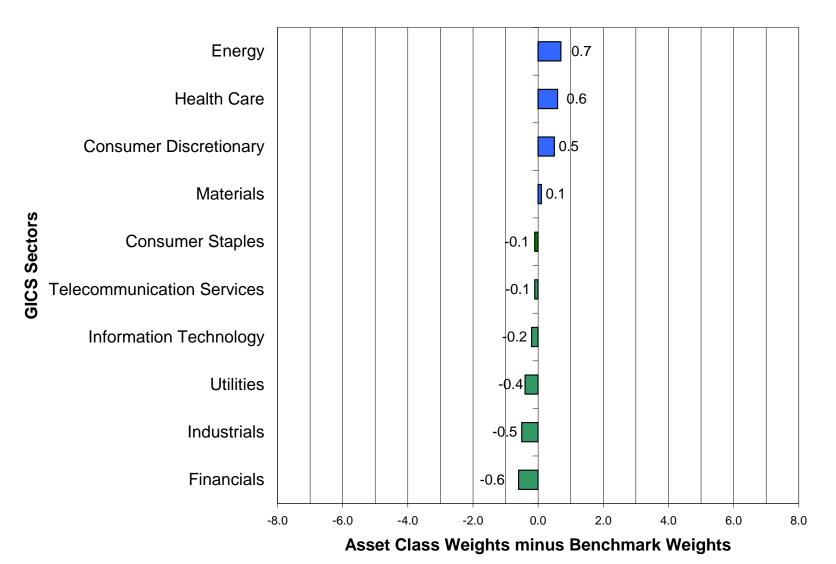


Positions: Style Analysis – Portfolio Style Skyline

Total Fund Large Cap Equity As of March 31, 2008



Positions: Economic Sectors ASRS U.S. Equity Large Cap Asset Class As of March 31, 2008

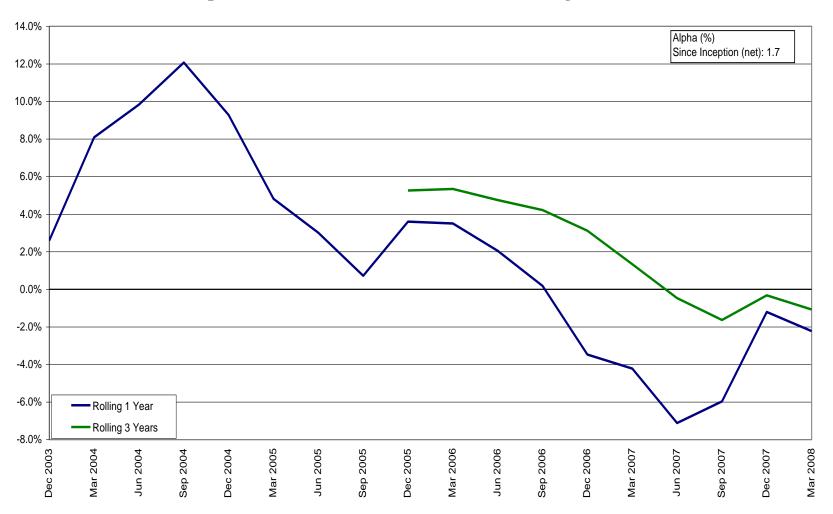


U.S. Equity Large Cap Manager Reviews (Individual)

INTECH Qualitative Factors

Factors	Description	
People	 Key functions have at least two people assigned, so there will always be backup in the event of a loss of a person. All portfolios are managed on a team basis. Due to the mathematical nature of INTECH's strategies, no traditional portfolio managers research analysts or traders are employed. 	
Philosophy	• Based on the research of Dr. Robert Fernholz, INTECH believes that by combining securities with high relative volatility, but low covariance, more efficient portfolios can be constructed.	
Process	 INTECH seeks to re-weight the benchmark index to a more efficient combination. Utilize the relative volatility of stock prices to attempt to capture excess return as opposed to predicting alpha. 	
	• The only input to the investment process is historical stock price. The investment process attempts to combine stocks with high relative volatility and low correlation in target weightings in a portfolio designed to provide excess return while minimizing risk.	
	 Optimization and rebalancing is key to maintaining weights over time. All research is oriented towards mathematical finance and its application to portfolio management and system improvements. 	

Alpha INTECH LCG Inception Date December 31, 2002- Period Ending March 31, 2008



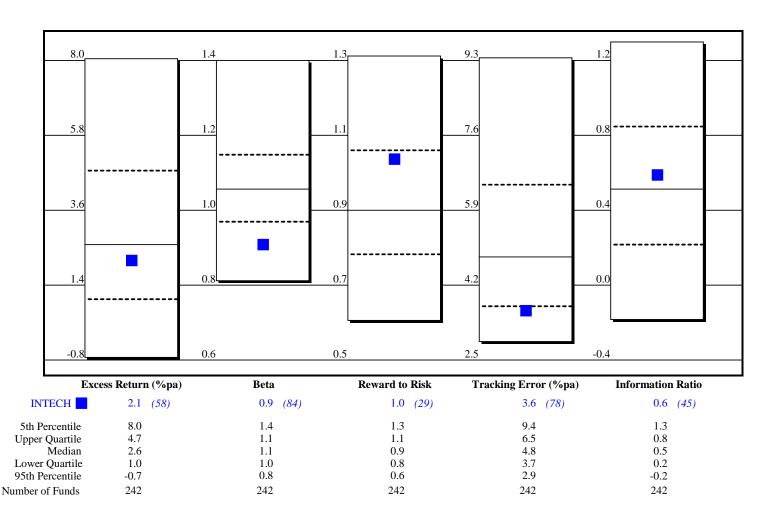
Information Ratio INTECH LCG

Inception Date December 31, 2002 - Period Ending March 31, 2008



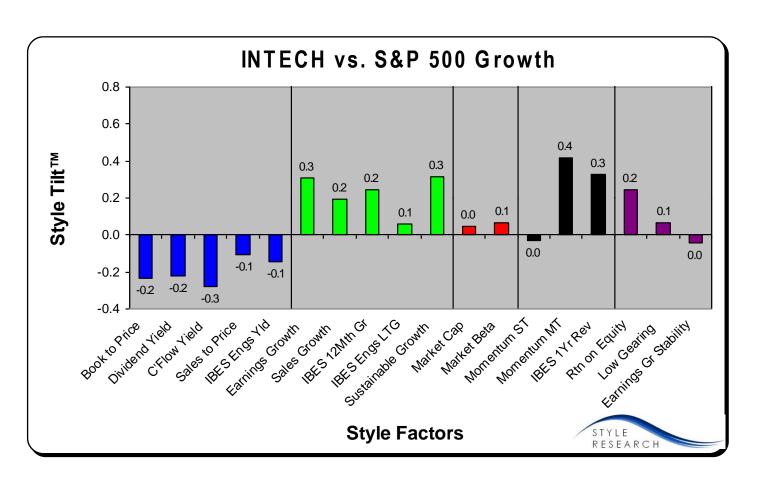
Peer Comparison with the Mercer U.S. Equity Large Cap Growth Equity Universe INTECH LCG

Inception Date December 31, 2002 - Period Ending March 31, 2008



Positions: Style Analysis – Portfolio Style Skyline INTECH LCG

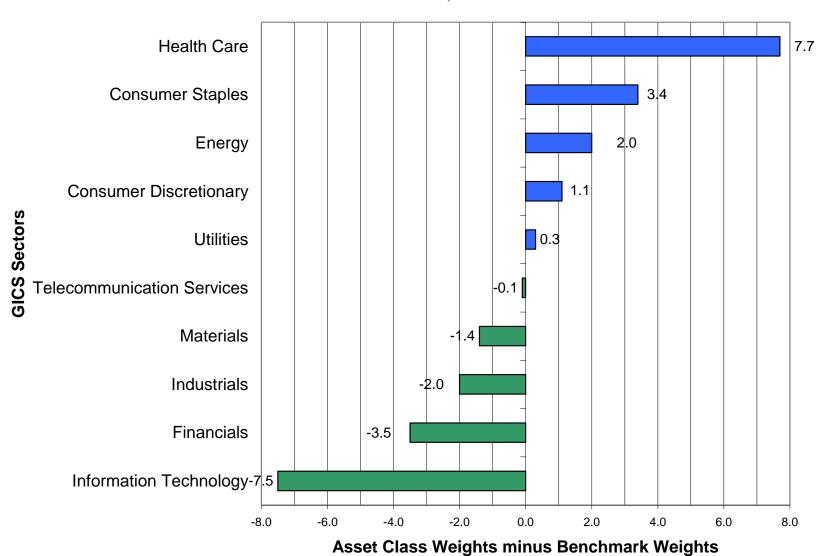
As of March 31, 2008



Positions: Economic Sectors

INTECH LCG

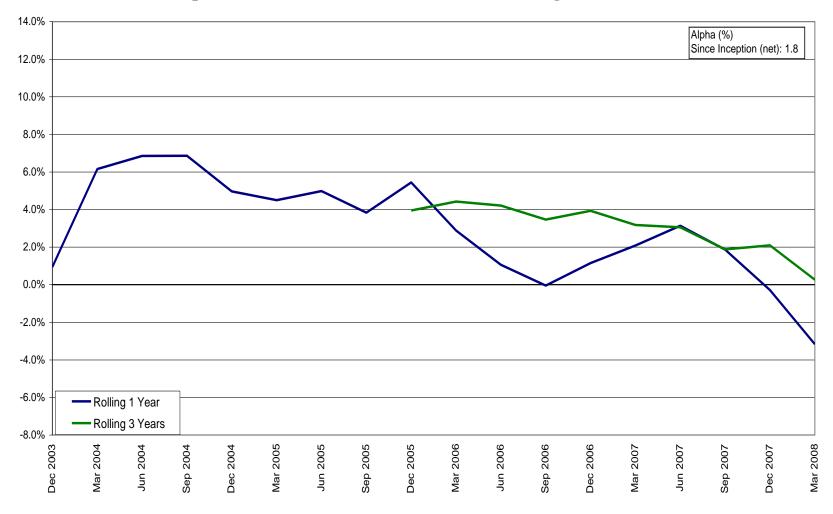
As of March 31, 2008



LSV Asset Management Qualitative Factors

Factors	Description
People	 No turnover in investment management team. The same team of academics and quantitative analysts is responsible for managing all value equity portfolios.
Philosophy	Based on original academic research in behavioral finance, LSV believes markets are inefficient as investors tend to extrapolate past performance too far into the future.
Process	• Quantitative approach ranks stocks on fundamental measures of value, past performance and indicators of near-term potential.
	• Portfolio is optimized to ensure the portfolio is broadly diversified across industries and companies.
	Control tracking error relative to the benchmark by maintaining strict buy/sell criteria.
	Deep value orientation.
	• The competitive strength of this strategy is that it avoids introducing to the process any judgmental biases and behavioral weaknesses that often influence investment decisions.

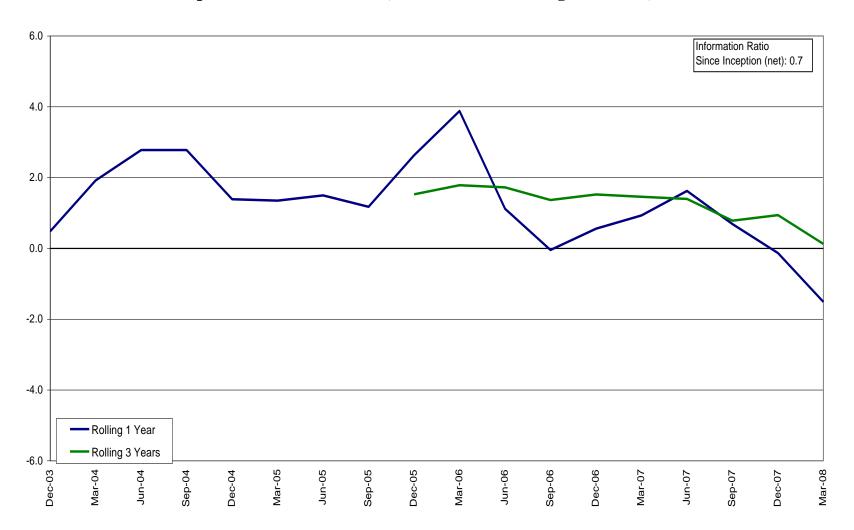
Alpha LSV Asset Management Inception Date December 31, 2002 - Period Ending March 31, 2008



Calculated quarterly

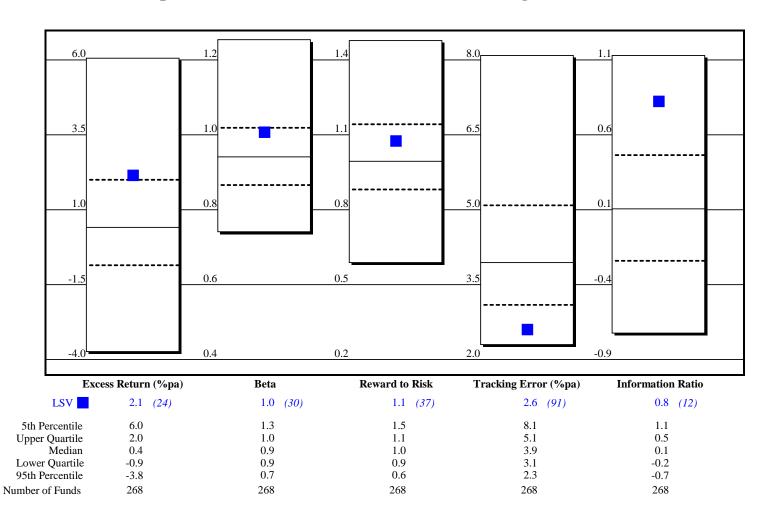
Information Ratio LSV Asset Management

Inception Date December 31, 2002 - Period Ending March 31, 2008

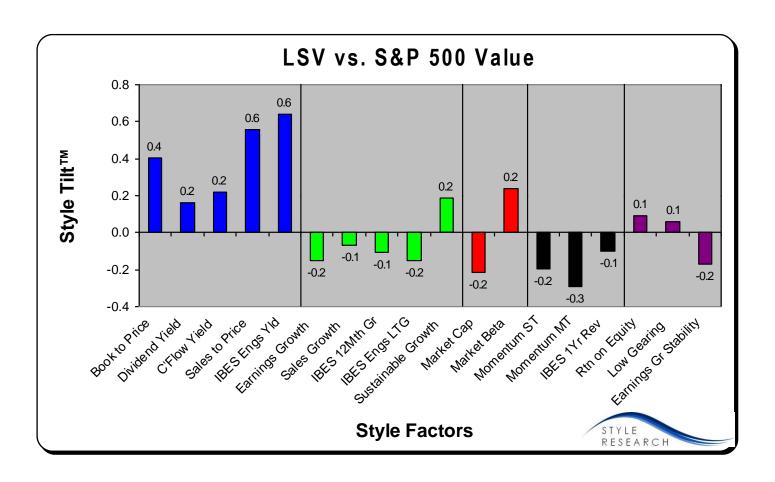


Peer Comparison with the Mercer U.S. Equity Large Cap Value Universe LSV Asset Management

Inception Date December 31, 2002 - Period Ending March 31, 2008

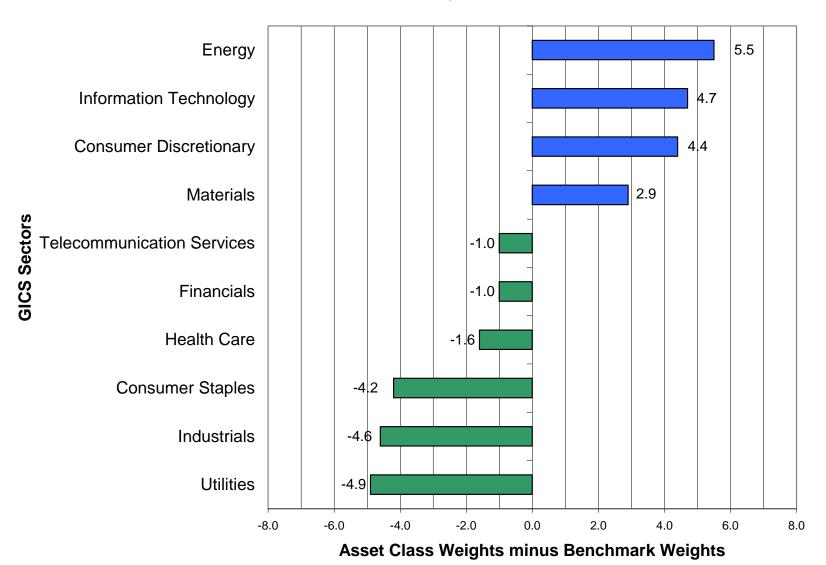


Positions: Style Analysis – Portfolio Style Skyline LSV Asset Management As of March 31, 2008



Positions: Economic Sectors

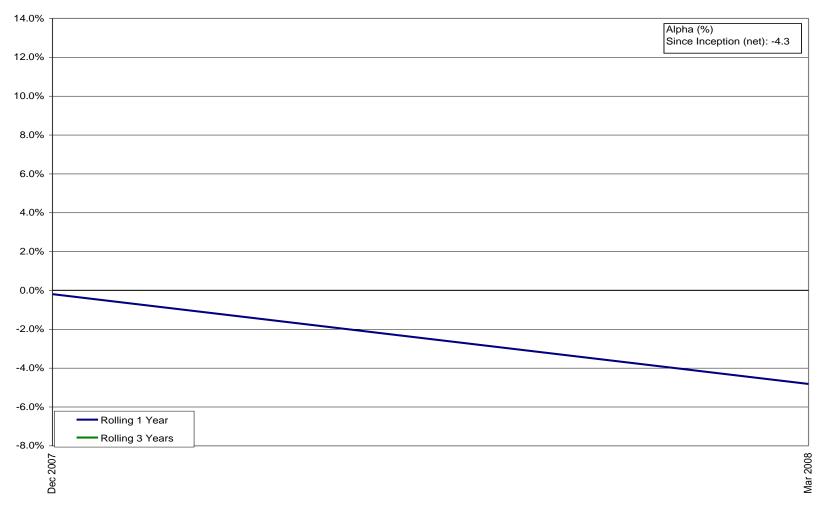
LSV Asset Management As of March 31, 2008



Jacobs Levy Equity Management Qualitative Factors

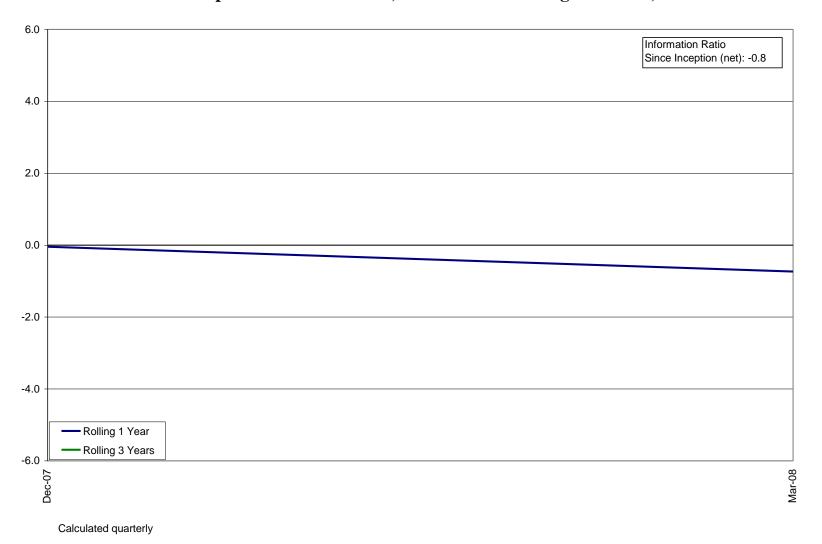
Factors	Description	
People	 Jacobs Levy is an independent investment firm. Principals Bruce Jacobs and Ken Levy founded the firm in 1986 and serve as co-portfolio managers and co-directors of research. The research team is composed of four senior Ph.D. researchers and ten Investment Systems Analysts, all with advanced degrees. 	
Philosophy	• Believe market inefficiencies can be detected and exploited by "disentangling" stock returns to find true sources of alpha.	
	Believe one must maintain a dynamic and forward looking approach.	
Process	• Models look at prices, company information, economic conditions and investors' human behavior.	
	Long-short investing permits more meaningful security under- and overweights.	
	• Optimizer integrates the long and short positions relative to benchmark weights, accounts for hard to borrow stocks and actively limits the downside on short positions.	
	Sophisticated trading techniques and capacity constraints minimize transaction costs.	
	• No leverage is used to obtain market exposure; short sales pay for additional longs; longs serve as collateral for shorts.	
	Broadly diversified across stocks, market inefficiencies and sectors.	

Alpha Jacobs Levy 120/20 Strategy Inception Date October 31, 2006 - Period Ending March 31, 2008



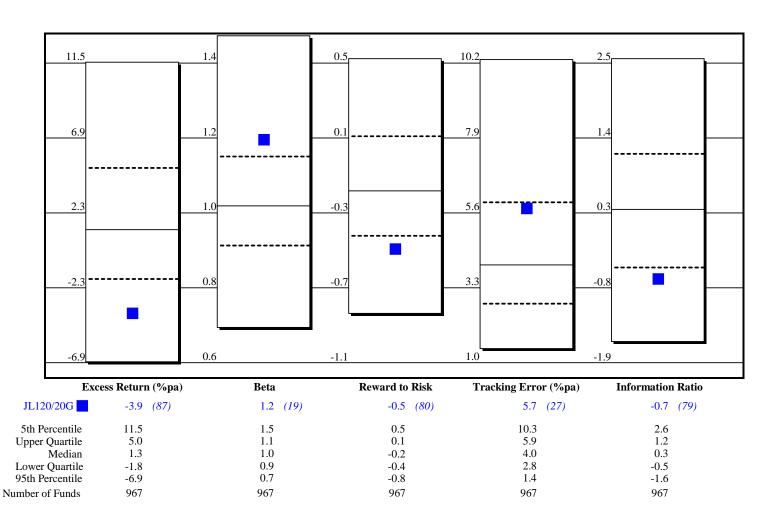
Information Ratio

Jacobs Levy 120/20 Strategy Inception Date October 31, 2006 - Period Ending March 31, 2008

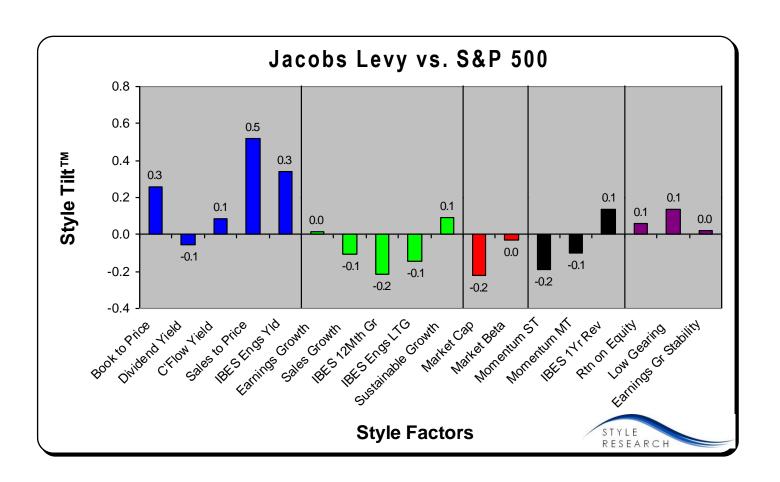


Peer Comparison with the Mercer U.S. Equity Large Cap Equity Universe Jacobs Levy 120/20 Strategy

Inception Date October 31, 2006 - Period Ending March 31, 2008

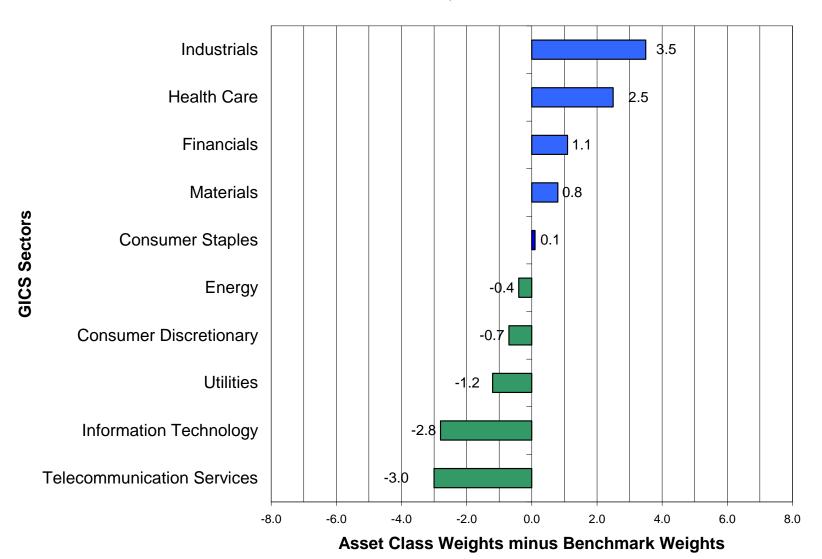


Positions: Style Analysis – Portfolio Style Skyline Jacobs Levy 120/20 Strategy As of March 31, 2008

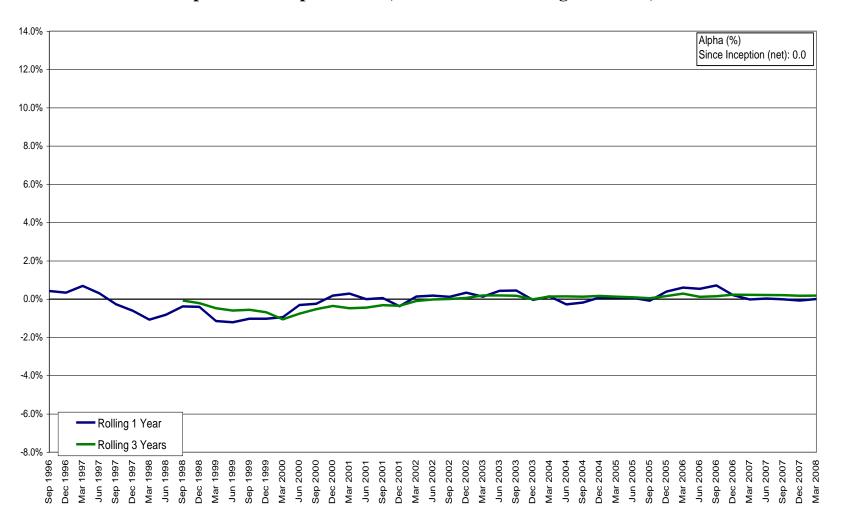


Positions: Economic Sectors

Jacobs Levy 120/20 Strategy As of March 31, 2008



Alpha Internally Managed ASRS E1 Inception Date September 30, 1995 - Period Ending March 31, 2008

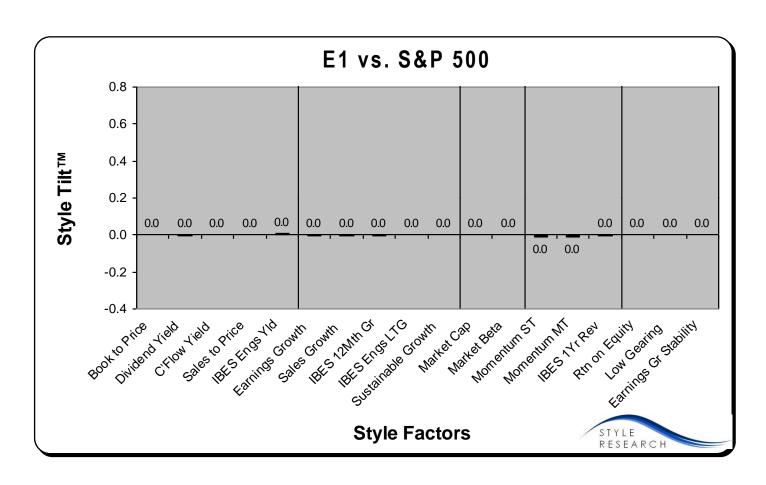


Information Ratio Internally Managed ASRS E1

Inception Date September 30, 1995 - Period Ending March 31, 2008

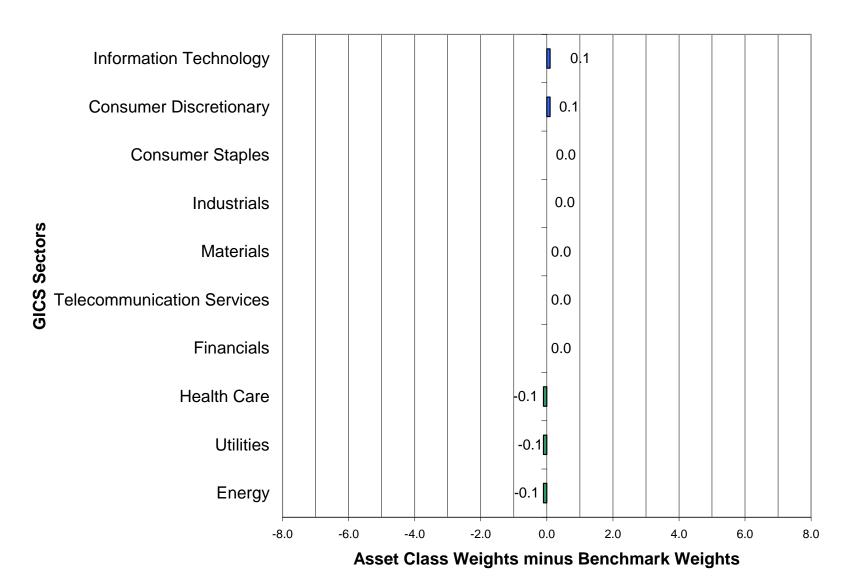


Positions: Style Analysis – Portfolio Style Skyline Internally Managed ASRS E1 As of March 31, 2008

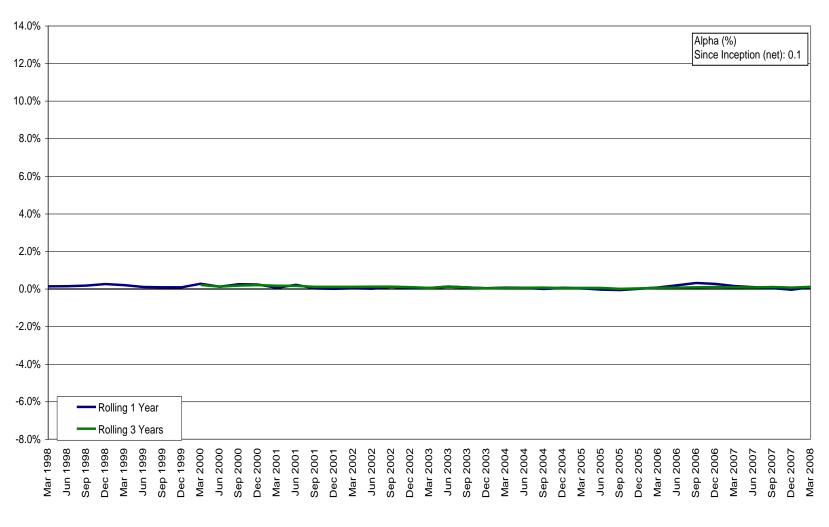


Positions: Economic Sectors

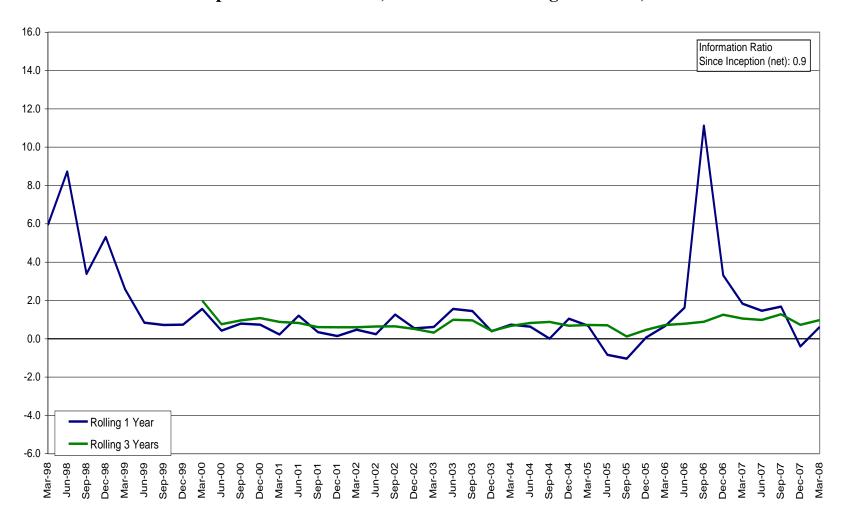
Internally Managed ASRS E1 As of March 31, 2008



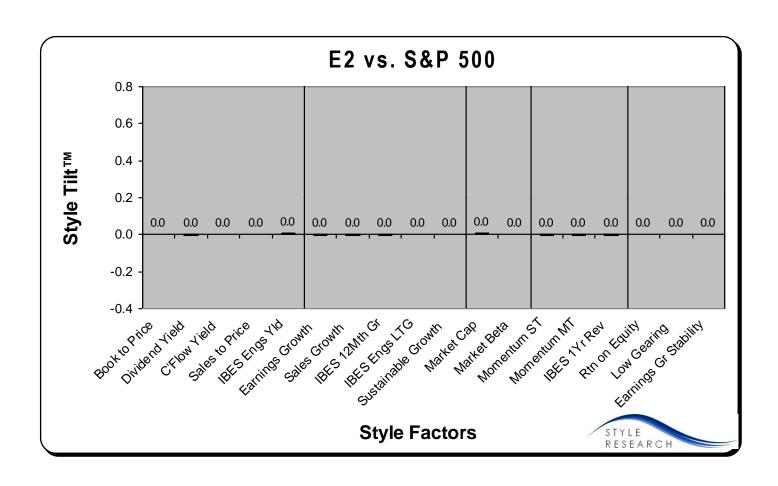
Alpha Internally Managed ASRS E2 Inception Date March 31, 1997 - Period Ending March 31, 2008



Information Ratio
Internally Managed ASRS E2
Inception Date March 31, 1997 - Period Ending March 31, 2008

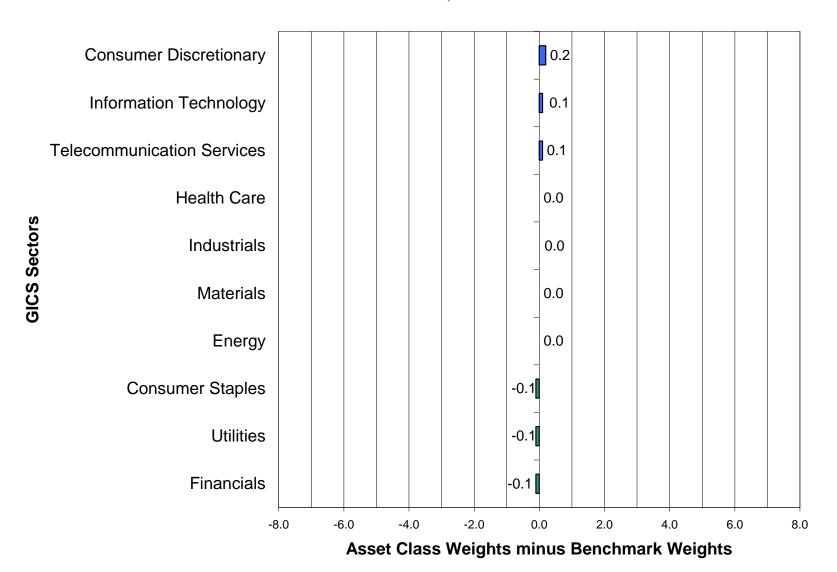


Positions: Style Analysis – Portfolio Style Skyline Internally Managed ASRS E2 As of March 31, 2008

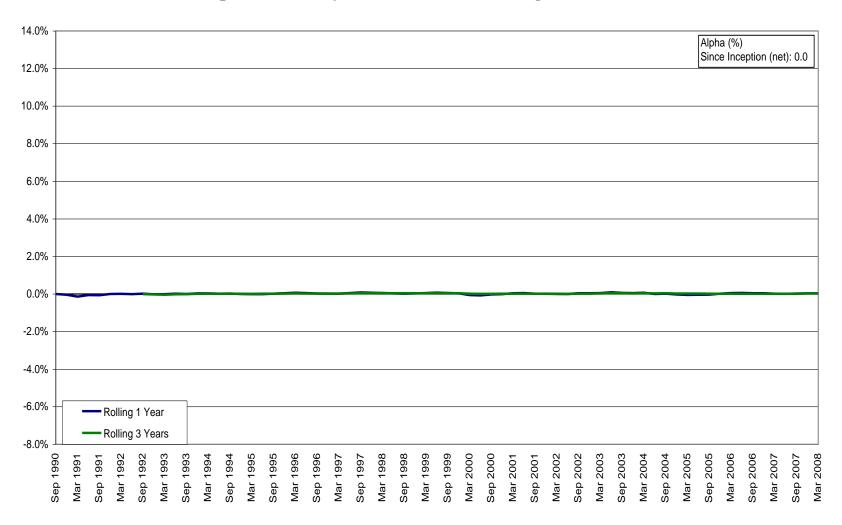


Positions: Economic Sectors

Internally Managed ASRS E2 As of March 31, 2008

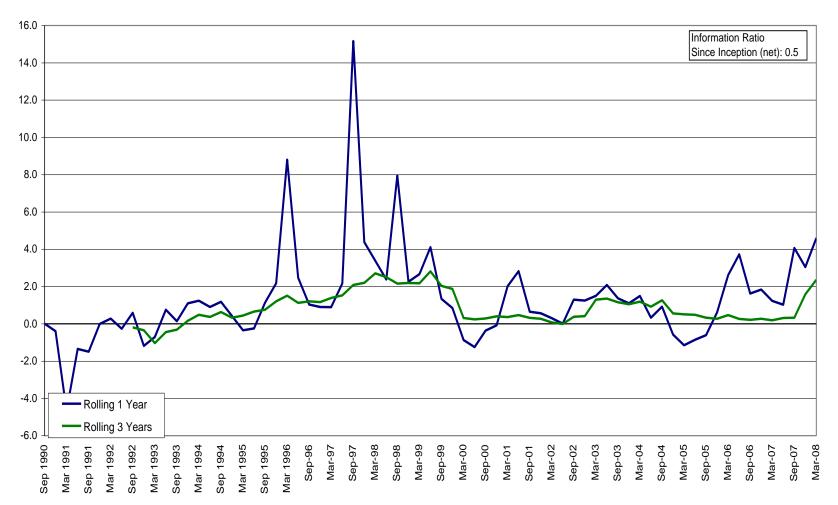


Alpha BGI LCC Equity Inception Date July 31, 1989 - Period Ending March 31, 2008

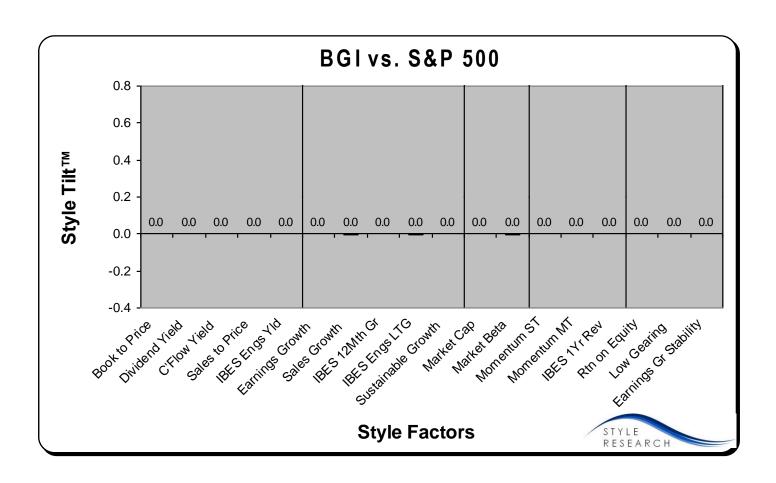


Information Ratio BGI LCC Equity

Inception Date July 31, 1989 - Period Ending March 31, 2008



Positions: Style Analysis – Portfolio Style Skyline BGI LCC Equity As of March 31, 2008



Positions: Economic Sectors

BGI LCC Equity As of March 31, 2008

